

MORE Information

To find out more visit;	Description	Website Address
Current Rebates		
Aust Federal Government Rebates	Information on current federal rebates	http://www.environment.gov.au/rebates/index.html
NSW Residential Rebate Program	Information on state rebates available	http://www.environment.nsw.gov.au/rebates/ccfhrs.htm
Specific Appliances		
Energy Rating	Information on energy star energy ratings	www.energyrating.gov.au
Choosing a Hot Water System	Information on what to consider when buying a new hot water system	http://www.sustainability.vic.gov.au/resources/documents/Choosingahotwatersystem.pdf
EnergyAustralia Appliance Calculator	An online calculator to measure your appliances	http://www.energy.com.au/energy/ea.nsf/Content/Ways+Small+Appliance+Calculator
Choosing a Hot Water System	Information on what to consider when buying a new hot water system	http://www.environment.nsw.gov.au/energy/hwschoose.htm
More Sustainability Information for your home		
GreenPower	Information on how to switch to GreenPower	http://www.greenpower.gov.au/home.aspx
Global Warming Cool It	A home guide to reducing energy costs and greenhouse gases	http://www.environment.gov.au/settlements/gwci/
Your Home	Information on making your home more sustainable, designing, updating or building.	www.yourhome.gov.au
NABERS	A online tool to conduct a home energy audit	http://www.nabers.com.au/
Want to know more?		
Department of the Environment, Water, Heritage and the Arts	National policy, programs and legislation to protect and conserve Australia's environment	http://www.environment.gov.au/
Resource Smart Sustainability Victoria	A wealth of information on a range of sustainability issues	http://www.resourcesmart.vic.gov.au/
Save Energy Resource Smart Sustainability Victoria	A comprehensive source of information for practical tips on saving energy in the home	http://www.saveenergy.vic.gov.au
Australian Conservation Foundation Online	A not-for-profit organisation with information on sustainable living, climate change and many other environmental topics	www.acfonline.org.au
World Wildlife Foundation	A not-for-profit organisation with information on environmental action, sustainability and climate change	http://www.wwf.org.au/
Energy Smart Homes	Tools to conduct your own home energy audit	http://www.energysmart.com.au
Cool Communities Home Greenhouse Audit Manual	A comprehensive overview of conducting an energy audit in your home.	http://www.environment.gov.au/settlements/local/publications/audit.html
NSW Dept of Environment and Climate Change	Sustainable household information on water, energy and waste.	http://www.environment.nsw.gov.au/households/
Motivating Home Energy Action	A research paper on how to motivate home energy action	http://www.environment.gov.au/settlements/local/publications/motivating.html
Transport Information		
Green Vehicle Guide	Check the fuel consumption of your car	www.greenvehicleguide.gov.au
Travel Smart	Information on alternatives to car transport	www.travelsmart.gov.au

References

- 1 Department of the Environment and Water Resources. 2006. Global Warming Cool It: A home guide to reducing energy costs and greenhouse gases. Department of the Environment and Heritage's Australian Greenhouse Office, Canberra.

2 Solar Inverters 2008, Power Usage Meter User Manual L7663, Solar Inverters Pty Ltd URUNGA NSW

3 Energy Australia (2008) Where does your household energy go? Online accessed January 2009 [http://www.energy.com.au/energy/ea.nsf/AttachmentsByTitle/Energy+Usage+Guide/\\$FILE/EnergyUsageGuideDec08.pdf](http://www.energy.com.au/energy/ea.nsf/AttachmentsByTitle/Energy+Usage+Guide/$FILE/EnergyUsageGuideDec08.pdf)
- 4 Department of the Environment, Water Heritage and the Arts 2008, Your Home; Technical Manual Online Accessed January 2009 <http://www.yourhome.gov.au/technical/pubs/fs61.pdf>

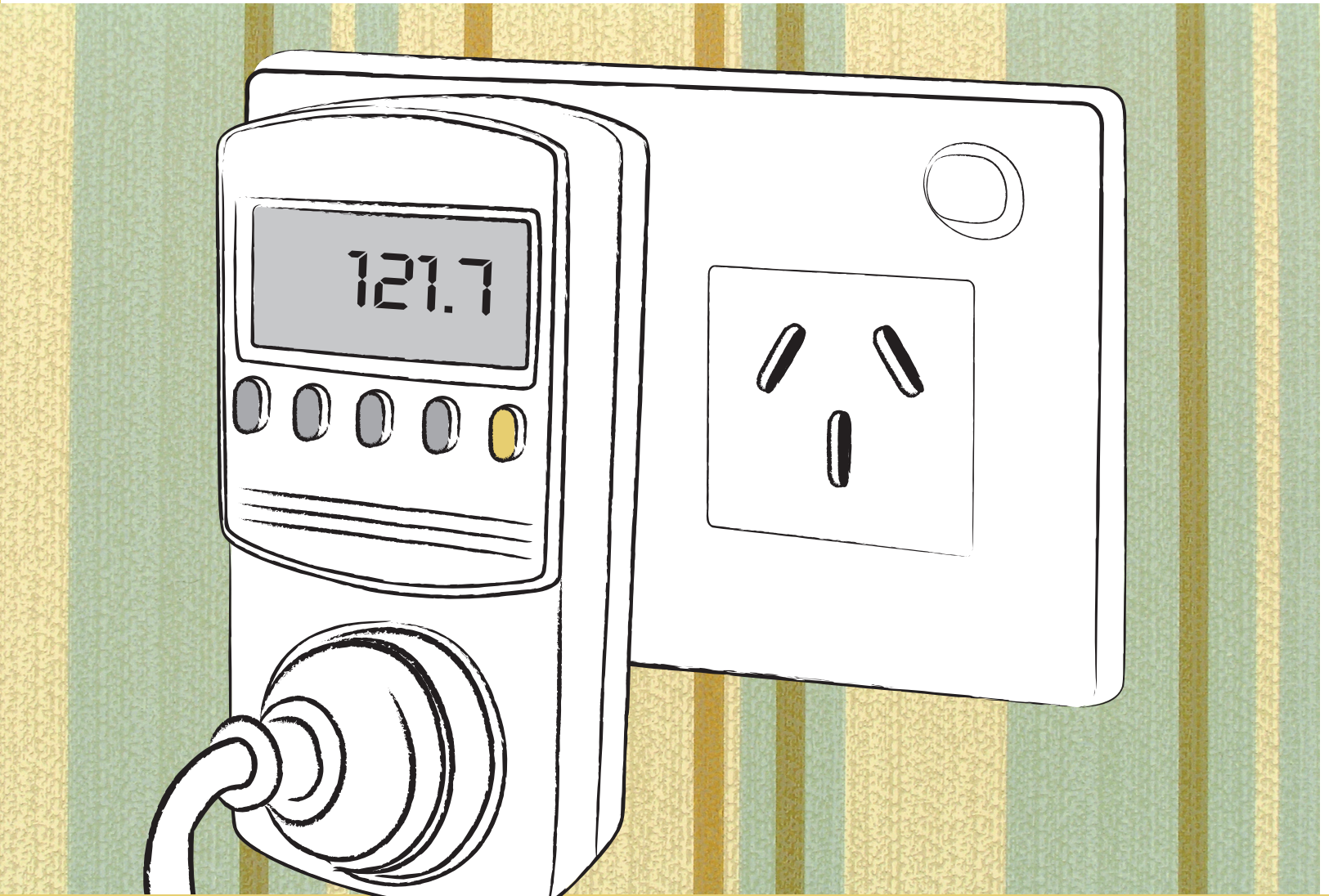
5 Moreland Energy Foundation 2001 Cool Communities Home Greenhouse Audit Manual, Department of Environment, Water, Heritage and the Arts Australian Greenhouse Office.

6 Sustainability Victoria , 2008 Resource Smart, Operating Costs of Electrical Appliances accessed January 2009 http://www.sustainability.vic.gov.au/resources/documents/Operating_costs_of_electrical_appliances.pdf

FOCUS on Energy Reduction



FREE HOUSEHOLD ENERGY ASSESSMENT BOOKLET



BE ENERGY SMART – Save money and help reduce your impact on climate change.

For more information please contact your local council and speak to the Environment Officer.

This project has been assisted by the New South Wales Government through its Environmental Trust

HUNTER AND CENTRAL COAST REGIONAL ENVIRONMENTAL MANAGEMENT STRATEGY

100% Recycled Paper

This project has been assisted by the New South Wales Government through its Environmental Trust

AN INITIATIVE OF HUNTER, MID NORTH COAST AND CENTRAL COAST COUNCILS

Prepared for the
Hunter & Central Coast
Regional Environmental
Management Strategy
HCCREMS (2009)
FOCUS on Energy Reduction.
Hunter Council's Environment Division.



FOCUS ON
SUSTAINABILITY



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Standby Power

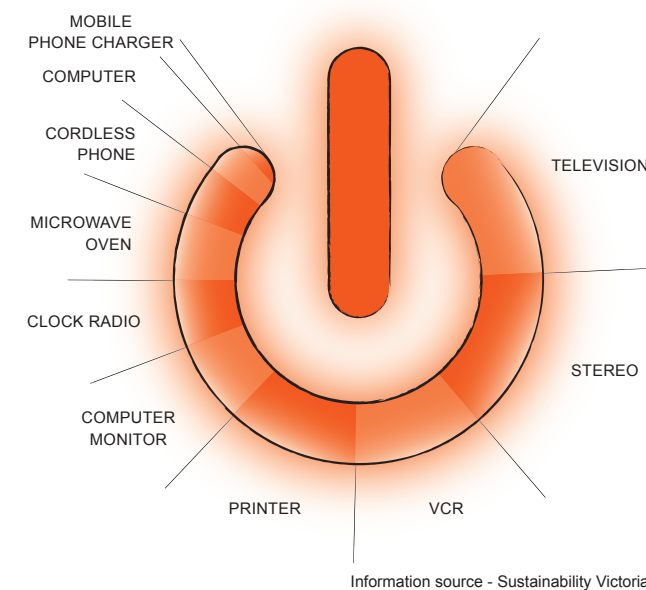
Around 10% of your homes electricity consumption is wasted by standby power, this could be costing your around \$100 per year. ⁵



- Switch off all appliances at the wall when they are not in use, not just with a remote control.
- When purchasing TV's, DVD's and VCR's look for the Energy Star labels. This label means minimal power is used when in standby mode.
- Remember a screen saver doesn't save energy, it uses energy! By enabling the Energy Star feature, your computer or monitor will go into a low-energy sleep mode when it is standing idle.

For instructions on how to Energy Star enable your computer, go to www.energystar.gov.au/consumers/stepbystep.html

Standby Energy Consumption



Information source - Sustainability Victoria

- Did you know – a lap top can generate 40 kilograms of greenhouse gases each year, desktop computers used in the same way can generate between 200-500 kilograms, more than half of this is generated by the monitor! ¹
- An LCD panel monitor generates around half as much greenhouse gas as a conventional monitor, reducing its brightness can cut emissions by 75%. ⁵
- Over the whole year, microwave ovens generate more greenhouse gas running the digital clock than cooking food. ¹

YOUR HOUSEHOLD and Climate Change

Climate change is recognised as one of the greatest challenges facing our future. Household energy is a significant contributor to Australia's greenhouse gas emissions. Changing your consumption and energy use will reduce your impact on climate change. Change today for a better future tomorrow.

Simple things you can start doing today

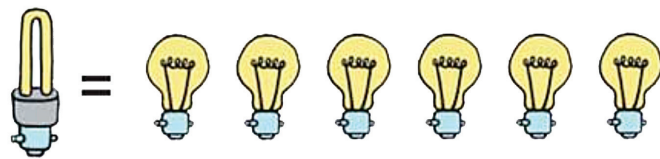
1. Install a low flow showerhead.
2. Limit your showers to 4 minutes.
3. Conserve heat this winter by closing off doors and only heating living areas.
4. Get rid of the second fridge or turn it off when not required.
5. Wash clothes in cold water.
6. Use the clothes line.
7. Switch to energy efficient light bulbs (CFL's).
8. Turn off any lights when not required.
9. Turn off appliances on standby mode.
10. Purchase a minimum of 10% GreenPower this year.

“But I am just one person, how can my decisions affect the environment?”

Some decisions have long-lasting effects. When buying a home, car or major appliance, that one decision will influence greenhouse gas emissions for many years. For example, a 1 or 2 star energy rated dishwasher could generate 40% more greenhouse gas emissions than a dishwasher rated 4-5 stars, this could mean the difference of 5 tonnes of emissions during its lifetime.

Lights

- Change your light globes to compact fluorescents.
- Turn off the lights when you leave a room.
- Consider a smaller lamp (with a compact fluorescent globe of course!) in areas where lighting is left on for long periods of time (e.g. hall way, living room).
- Try to avoid halogen lighting systems (each globe has a transformer which reduces the energy efficiency gains).
- Install daylight or movement sensors on your outdoor lights to avoid them being left on unnecessarily.
- Over time, dirt or dust build-up can reduce light output so clean your lamps and light fittings regularly to reduce the need for extra lighting.



Over its life, a typical compact fluorescent lamp saves around a third of a tonne of greenhouse gas and \$45 (compared to incandescent globes). Use of compact fluorescent globes also avoids the purchase cost of 6 or more incandescent globes - you don't have to change the bulbs as often! ¹

- Each year electricity used for lighting an average Australian home generates around three quarters of a tonne of greenhouse gas and costs around \$100. ¹
- Just a few outdoor lights left on every evening can double a households, greenhouse gas emissions and lighting cost.

Swimming Pools and Spas

The average 40sq metre pool will cost around \$600-\$800 to heat per year with a gas pool heater. Pool filter pumps can also be a big energy consumer using up to 2500kWh or \$350 every year.

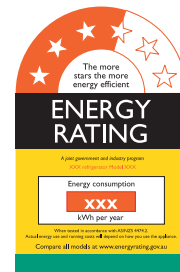
- Only use pool filters for a maximum of 6 hours a day (depending on exposure to sunlight, debris etc). Install a timer switch which can control this for you.
- Avoid over heating the pool. Each degree increase in temperature increases costs and power consumption by around 10%.
- Surround your pool with plants or a fence to act as a wind-break, this will help reduce evaporation and heat loss.
- Using a pool cover will assist to maintain water temperature and minimise evaporation.

- A pool filter pump generates 1-3 tonnes of greenhouse gas each year (that is 1 kilogram every 1-3 hours!). ⁵

OTHER LOW COST measures to reduce your household greenhouse gas emissions

Star Energy Rating

If you are buying a new appliance such as a fridge, freezer or dishwasher, look at the energy rating label (and water rating labels for dishwashers). Select an appliance with a high star rating. The Energy Star Rating label will tell you how much energy an appliance will consume over a year. For example if a fridge used 600kWh per year, it will cost around \$85 a year to run or \$850 over 10 years.



GreenPower

GreenPower is the best way to reduce your greenhouse emissions in the home.

GreenPower is a national accreditation program for renewable energy products offered by electricity suppliers. When you purchase GreenPower your energy supplier buys electricity from renewable sources, which avoids burning coal to produce electricity. Renewable energy is derived from sources that can be replaced and not depleted over time and include:

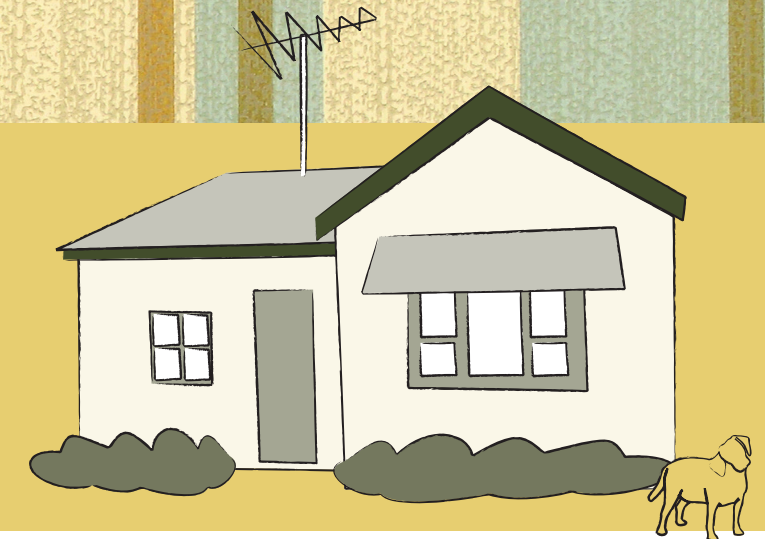
- Wind;
- Solar Power;
- Hydro-electric power;
- Geothermal energy;
- Wave and tidal power; and
- Biomass (landfill gas, municipal solid waste, agricultural wastes, energy crops, wood wastes).

You are able to nominate the percentage of GreenPower you would like, from 10% through to 100% of your total power requirements.

Making the switch is easy, simply contact your choice of electricity supplier or contact Green Power on 1300 852 688 or visit www.greenpower.gov.au.

- Some energy providers show household greenhouse gas emissions on energy bills so you can check that your emissions have reduced after signing up to a green power scheme.
- Switching to 100% GreenPower is the equivalent to taking two cars off the road each year (based on an average household energy bill).

FOCUS on Energy Reduction



THIS HOUSEHOLD ENERGY ASSESSMENT BOOKLET will help you to identify practical ways to reduce energy consumption by making simple changes to how you use electricity at home.

Australians are the biggest greenhouse gas emitters of the developed world. Every year the average Australian household produces 14 tonnes of greenhouse gases. 66% of household greenhouse gas emissions are a result of electricity use within the home. ¹

You can save several tonnes of greenhouse gas emissions through simple changes, thereby reducing your impact on climate change and saving money.

USING THE Power Meter to conduct your household energy assessment

The Power Usage Meter, when plugged into each appliance, measures it's energy consumption. You can use this Energy Reduction Kit to:

- Measure the amount of energy you currently use;
- Compare the electricity 'thirst' of various appliances at home to help you identify where you might be able to make the biggest savings;
- Determine the cost of energy used to run each appliance over time; and
- Determine the greenhouse gas emissions of your appliances.

Sometimes it will be difficult to use the Power Usage Meter to measure your consumption (e.g. water heating systems, stove tops and ovens), so standard energy consumption information has been provided in the home energy assessment.

Once you know how much each appliance costs to run, you can change how you use each appliance, potentially saving your household hundreds of dollars per year.

Most household energy assessments will take an hour to complete, however it may take time for the Power Usage

Meter to accumulate enough data to make a calculation so don't be surprised if the initial total cost displayed is 0.00.

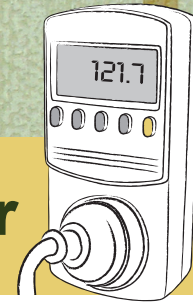
The longer that an appliance is attached to the meter, the more accurate the calculation becomes. This is especially true for appliances that cycle on and off such as refrigerators and televisions.

For example if a television is used 4 hours a day, it is important to also measure the 20 hours a day that the television is not in use in order to get an accurate projection of its running costs over a year.

This booklet is yours to keep. Store it in a handy place for future reference.

WARNING: IMPORTANT SAFETY INFORMATION

- Take care near any electrical or gas appliance.
- Always turn off power points before plugging in or unplugging appliances.
- Children under 16 years old must be supervised when using the Power Usage Meter.
- To reduce the risk of fire or electrical shock, do not expose this appliance to water or moisture.
- Never insert foreign objects into the Power Usage Meter.



HOW TO USE the Power Usage Meter

The following instructions are supplied by Solar Inverters and are a direct copy of the User Manual supplied for the Power Usage Meter L7663.

1. Connect the Power Usage Meter to a power outlet.
2. Connect the appliance to be measured/monitored to the Power Usage Meter (just like using a double adapter).
3. Press and hold the RESET key on the unit until 'rEST' appears.
4. Press and hold the SET button on the unit until 'Rate' is displayed. The kWh billing rate flashes in the display. Press UP and DOWN buttons to change the rate. For example, if the electricity company charges 30.25 cents per kWh then set the 'Rate' at \$0.3025.
5. Press the SET key again and 'SAVE' will appear briefly in the display.
6. To display the actual or projected cost of power consumed, press the MENU key until 'Cost' is displayed.
7. Pressing the UP and DOWN buttons will cycle through the cost projection periods. For example; if the display indicates '\$37' and 'Year', then the unit is projecting that the attached appliance will consume \$37 worth of electricity in one year.
8. To display power measurements press the MENU key until 'VOLT' is displayed.
9. Pressing the UP and DOWN buttons will display the various measurements made by the meter, choose 'WATTS'.
10. To display the accumulated measurement totals, press the MENU key until the desired unit is displayed. The available units include the accumulated running cost of the attached appliance, kWh rate, total kWh consumed and the elapsed time that the Power Usage Meter has been operating.
11. Once you have recorded your appliance energy usage information (on page 5 or 6) press and hold the RESET button until 'rEST' is momentarily displayed. This confirms that all previous measurements including the total accumulated kWh elapsed time and cost measurement have been reset to zero.

7 EASY STEPS to assessing your electricity use at home

1. Carefully read the instructions on how to use the Power Usage Meter.
2. Choose the appliances you will measure (use the enclosed 'Home Energy Assessment' as a guide).
3. Refer to your last energy bill to find out your cost of electricity or see examples provided by EnergyAustralia on page 6. Some electricity providers charge two or more rates depending on consumption, time of day, or the season. The Power Usage Meter determines cost calculations using just a single kWh rate. Refer to the rates on page 6 to determine the best rate for your average energy usage.
4. Plug the Power Usage Meter into the wall socket, then plug the appliance into the Power Usage Meter.
5. Record the 'Watts' and 'Cost Per Year' on the following table.
6. Estimate how often you use the appliance per week and for how long, and then check to see how you compare to the typical use for that appliance.
7. Read the supplementary information to see how you can improve your energy use, save money and reduce greenhouse gas emissions.

How to work out your Greenhouse Gas Emissions

1000 watts = 1 Kilowatt Hour (kWh)	Eg 800 watts / 1000 = 0.8 Kilowatt Hour (kWh)
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1kWh of electricity = 1 kilogram of Greenhouse Gas Emissions

If you purchase GreenPower you can reduce this figure (eg if you purchase 10% GreenPower reduce your total by 10% etc.)

Understanding your appliance running costs

Appliance Input wattage (kW) x Cost of 1 kW

If you have an electric heater that uses 800W of electricity and your energy retailer tariff is 27.5c per kW, then the hourly running cost is;
Heater Wattage kW = 800W divided by 1000 = 0.8kW
= 0.8kW x 27.5c = 22c per hour

Dishwashers

Using your dishwasher efficiently could save you up to \$100 per year.

- Avoid rinsing your dishes in hot water before placing them in the dishwasher, just rinse them with cold water.
- Only use your dishwasher once it is full, and use the energy/water saving setting.
- If you have an electric hot water system – only connect cold water to your dishwasher. Dishwashers can heat water very effectively and do not need connection to the hot water supply (avoid heating water twice). To do this you will need to contact an accredited plumber.

- Dishwashers may generate up to 500 kilograms of greenhouse gas each year.
- Rinsing dishes under running hot water before putting them in the machine could use more hot water than the entire dishwasher cycle.

Clothes Washing and Drying

The laundry can account for around 5% of your household greenhouse gas emissions. ³

- Wash in cold water and use a clothes line or drying rack – avoid using a clothes dryer.
- If you have to use your dryer, minimise the time it is on by hanging things out first (you will save energy by only drying things in the dryer for 10 minutes rather than leaving it on for 30 minutes).
- Always use the spin cycle in your washing machine to remove as much water as possible before you dry your clothes.
- Use your economy cycle, and if you are washing heavily soiled items, soak them overnight before putting them in the machine (avoid having to rewash them).

- Each year the energy used to run an average clothes washer produces about 90 kilograms of greenhouse gases. If you wash with hot water this adds another 475 kilograms! ¹

Cooking

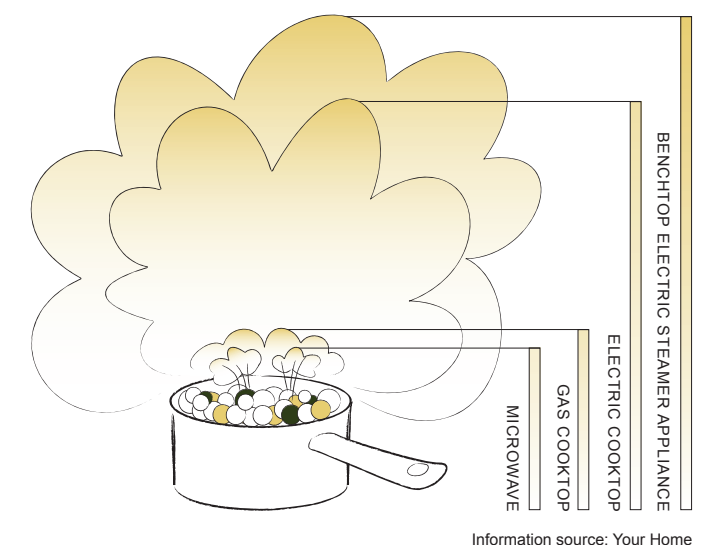
In general a gas cook top will produce less than half the greenhouse gases of a standard electric unit.

- Keep lids on your pots when boiling, steaming or cooking.
- Using your microwave more often can save on energy used by the stove or oven.
- Always use the fan in your oven when cooking as this circulates the heat more effectively.
- Where possible fill your oven and try to cook a few dishes rather than just one.
- Avoid overfilling kettles and saucepans, only boil what you need, and if possible boil water in your kettle rather than stove top.
- Check the seal on your oven door to ensure it is not losing heat. This could be a cheap repair that could improve your oven's performance.
- Avoid opening the oven door unnecessarily, the temperature inside can drop around 10°C each time the door is opened.

- Using a microwave rather than an electric oven can save you up to 70% in greenhouse gas emissions and running costs, saving you time and money!

Approx. Greenhouse Gas Emissions by cooking a serve of vegetables

0 - 0.3kg of GHG emissions per unit of heat delivered



Home Heating and Cooling

The energy used for heating and cooling a typical home generates more than one and a half tonnes of greenhouse gases and costs more than \$200 per year. ⁵

In summer

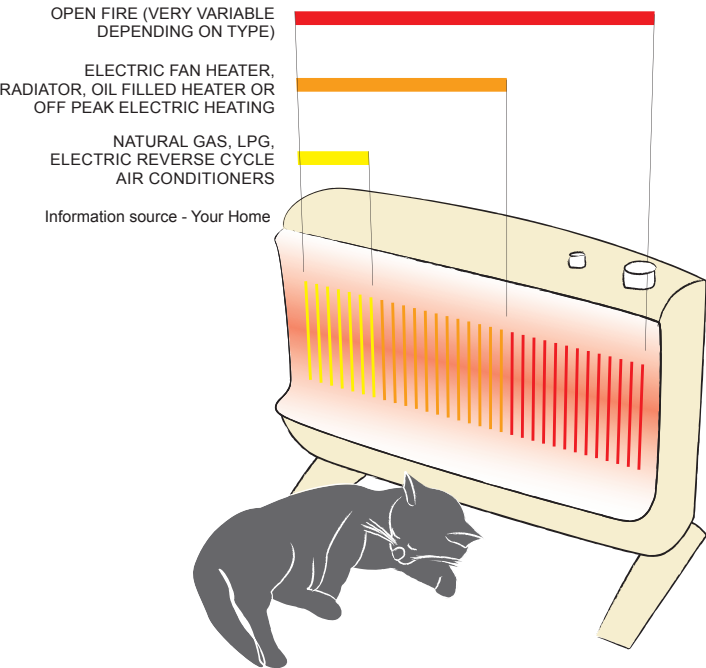
- Keep the hot air out, by closing up the house early in the day.
- Release hot air at night by opening your windows and doors rather than forcing your air conditioner to work over time.
- Ensure air vents are clear of dust.
- Shade your western windows and walls with plants, awnings or shade cloth.
- Use overhead ceiling fans to circulate cool air.
- Set your air conditioners to between 25-27°C.

In winter

- Keep your blinds, curtains or drapes closed on cold winter days.
- Capture the sun on warm days by opening your blinds or windows that receive direct sunlight.
- Use overhead ceiling fans on low to circulate heat.
- Only heat the main living areas and secure other areas of the house by closing doors.
- Minimise draughts around window panes by filling in gaps.
- Increase your home's insulation in the ceiling space
- Set your air conditioning heating to a more efficient temperature of 18-21°C.

Approx. Greenhouse Gas Emissions from Heaters

0 - 1.8kg of GHG emissions per unit of heat delivered



Refrigerators and Freezers

An average Australian fridge produces nearly 1 tonne of emissions and can cost up to \$200 a year. ¹

- Only switch on your 2nd fridge when it is needed, a single door fridge can save a tonne of Greenhouse gas emissions.
- Move your fridge and freezer out of direct sunlight and make sure it is well ventilated at the back, sides and top (remove any dust build up from the coils).
- Check the quality of the seals. Excessive ice build up can indicate that moist air is getting in through a poor door seal. A well sealed fridge door will hold a piece of paper in the seal.
- Try to keep the fridge well stocked but allow for good internal air circulation, this will help maximise your fridge's efficiency.
- Avoid opening the door for long periods, or frequently, especially when the surrounding air temperature is warm.
- Place cold items back in the fridge immediately after use.
- The recommended temperature for a fridge is between 3°C to 5°C or a freezer is -15°C to -18°C. ⁵

- If your fridge motor runs all the time, you could be wasting over 20 kilograms of greenhouse gases every week. Call a service provider for advice. ¹
- Buying a family fridge with an extra star on it's label cuts greenhouse gas emissions by more than 100 kilograms each year. Over it's lifetime it will save \$200 in running costs. ¹
- A typical new family fridge uses two thirds less energy than a 20 year old one. Hanging onto that old clunker could be costing \$130 and generating an extra tonne of greenhouse gases every year. ⁵

- An extra 1°C difference in temperature between indoors and outdoors can add around 10% to heating or cooling costs and greenhouse gas emissions.
- You can check draughts by using an incense stick (or similar). Secure the incense stick, light it and where there are no draughts the smoke will travel vertically.

HOME Energy Assessment

Refrigeration	Your Appliance		Typical Appliance		
Appliance	Watts	Cost per Year	Annual Energy Use (kWh)	Cost per Year	Emissions (kg /per Year)
Small / Medium Fridge Freezer Frost Free			508	\$96.95	539
Large Fridge Freezer Frost Free			769	\$146.76	815
Large Fridge Freezer side by Side			942	\$179.78	999
Small Bar Fridge			334	\$63.74	354
Chest Freezer			535	\$102.10	567
Medium Upright Freezer			629	\$120.04	667

Kitchen Appliances	Your Appliance		Typical Appliance				
Appliance	Watts	Cost per Year	Typical Power (watts)	Avg Hours per Week	Annual Energy Use (kWh)	Cost per Year	Emissions (kg /per Year)
Electric Fry Pan			1700	3	265	\$50.58	281
Juicer			300	1	16	\$3.05	17
Kettle			2400	1.5	187	\$35.69	198
Microwave Oven			1000	2.5	130	\$24.81	138
Rice Cooker			700	.75	27	\$5.15	29
Toaster			1000	1.3	68	\$12.98	72
Toasted Sandwich Maker			1100	.5	29	\$5.53	30
Cappuccino Maker			1260	1.2	79	\$15.08	83
Coffee Percolator (10-12 cup)			1000	1.2	62	\$11.83	66
Blender			600	1	31	\$5.92	33
Electric Wok			2000	1	104	\$19.85	110

Electric Cooking	Typical Appliance				
Appliance	Typical Power (watts)	Avg Hours per Week	Annual Energy Use (kWh)	Cost per Year	Emissions (kg /per Year)
Electric Cook Top (all 4 burners operating)	6000	10	3120	\$595.45	3307
Electric Cook Top (2 burners operating)	3000	10	1560	\$297.73	1654
Dishwasher (hot wash using cold tap connection 3 star)	2200	7	801	\$152.87	849
Electric Oven	2400	3.5	437	\$83.40	463

Bathroom and Laundry	Your Appliance		Typical Appliance				
Appliance	Watts	Cost per Year	Typical Power (watts)	Avg Hours per Week	Annual Energy Use (kWh)	Cost per Year	Emissions (kg /per Year)
Clothes Dryer			2400	3.5	437	\$83.40	463
Washing Machine Top Load			1100	3.5	200	\$38.17	212
Washing Machine Front Load			900	3.5	164	\$31.30	174
Hair Dryer			1000	1.5	78	\$14.89	83
Heated Towel Rack			100	3.5	164	\$31.30	174
Iron			1000	1.5	78	\$14.89	83
Vacuum Cleaner			1200	1	62	\$11.83	66
Four Bulb Heat / Light / Fan			1200	14	874	\$166.80	926
Two Bulb Heat / Light / Fan			650	14	473	\$90.27	502

Living Room	Your Appliance		Typical Appliance				
Appliance	Watts	Cost per Year	Typical Power (watts)	Avg Hours per Week	Annual Energy Use (kWh)	Cost per Year	Emissions (kg /per Year)
34cm Standard TV			70	38	138	\$26.34	147
Flat Screen 76cm TV			250	38	494	\$94.28	524
LCD 101cm TV			225	38	445	\$84.93	471
Plasma 107cm TV			310	38	613	\$116.99	649
Rear Projection TV			190	38	375	\$71.57	398
DVD Player			50	15	39	\$7.44	41
Games Console			200	10	104	\$19.85	110
Stereo System			70	7	25	\$4.77	27

Bedroom and Study	Your Appliance		Typical Appliance				
Appliance	Watts	Cost per Year	Typical Power (watts)	Avg Hours per Week	Annual Energy Use (kWh)	Cost per Year	Emissions (kg /per Year)
Desktop Computer			150	28	218	\$41.61	232
Laptop Computer			20	28	29	\$5.53	31
Printer			17	14	12	\$2.29	13
Clock Radio			6	168	52	\$9.92	56
Electric Blanket			120	14	87	\$16.60	93

Heating and Cooling	Your Appliance		Typical Appliance				
Appliance	Watts	Cost per Year	Typical Power (watts)	Avg Hours per Week	Annual Energy Use (kWh)	Cost per Year	Emissions (kg /per Year)
Portable Evaporative Cooler			103	28	50	\$9.54	53
Portable Oscillating Fan			50	14	12	\$2.29	13
Reverse Cycle Air Conditioner			2800	56	2718	\$518.73	2881
Small Electric Bar Heater			750	42	546	\$104.20	578
Large Electric Bar Heater			1000	42	728	\$138.94	772
Electric Fan (convection heater)			2400	42	1747	\$333.41	1852
Large Oil Bar Heater			2400	42	1747	\$333.41	1852

All these appliances are seasonal. These calculations are based on each appliance being in use for 4 months during the year.

Outdoor and Garage	Your Appliance		Typical Appliance				
Appliance	Watts	Cost per Year	Typical Power (watts)	Avg Hours per Week	Annual Energy Use (kWh)	Cost per Year	Emissions (kg /per Year)
Electric Drill			700	1	36	\$6.87	39
Chain saw			1800	1	94	\$17.94	99
Electric Saw			1000	1	52	\$9.92	55
Swimming Pool Pump			1130	42	2468	\$471.02	2616
Electric BBQ			2400	7	874	\$166.80	929
Outdoor Spa			6000	3	936	\$178.64	992

THE COST OF electricity

It is best to contact your electricity supplier or refer to your last bill to establish your electricity costs. Below are example costs from EnergyAustralia effective from 1 July 2010.

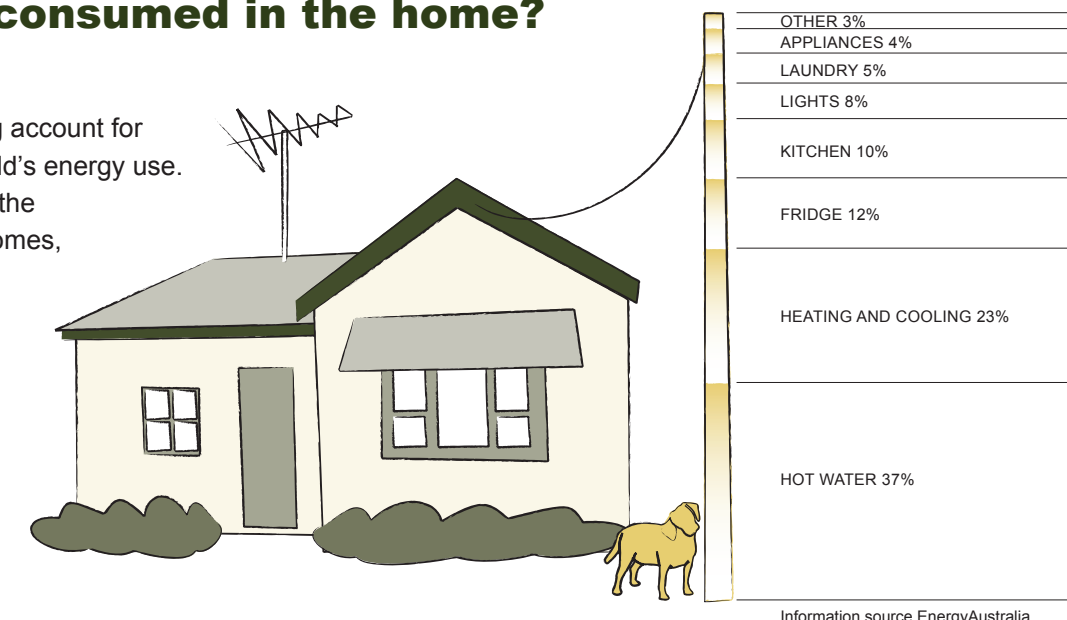
Domestic All Time	Cents per kWh (Inc. GST)
First 1,750 kWh per quarter*	19.0850 cents
Remaining usage per quarter	28.0500 cents

PowerSmart Home with a Time of Use Meter Installed	Cents per kWh (Inc. GST)
Peak: 2pm – 8pm on working weekdays	40.2600 cents
Shoulder: 7am – 2pm and 8pm-10pm working weekdays and 7am-10pm on weekends and public holidays	14.9600 cents
Off peak: all other times	8.8000 cents

All calculations based on using EnergyAustralia rates effective from 1 July 2010.
* Based on average daily quantity of 19.1781 kWh per billing day.

HOW IS ENERGY consumed in the home?

Water and home heating or cooling account for about 60% of an average household's energy use. Electric hot water systems are still the most common type in Australian homes, they account for around 37% of your power bill. ¹



Information source EnergyAustralia

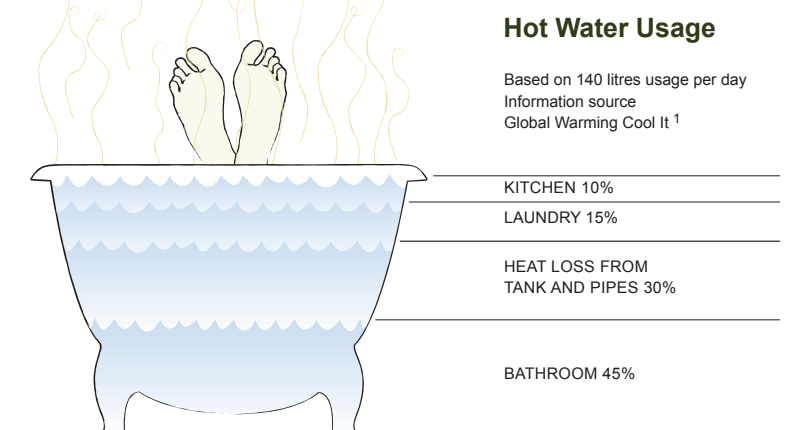
Hot Water Systems

You won't be able to measure your hot water system using your Power Usage Meter, but by reducing your usage you could save up to \$400 and prevent 5 tonnes of greenhouse gas emissions per year. Alternatives to electric hot water systems include natural gas hot water systems which consume less energy and produce only 1.5 tonnes of greenhouse gas emissions, costing around \$100 per year. ⁵ Solar hot water systems are the most environmentally friendly, providing savings of \$300-\$700 per year. The bathroom is where the majority of hot water is used in the home and where the biggest savings can be made. ⁵

Simple ways to save the power required for your hot water

- Turn your thermostat down to 60°C (no less). You can do this using the temperature dial, or you may need a qualified installer.
- If you have 'mixer taps' make sure it is pushed to the cold side to ensure hot water isn't used unnecessarily.
- 45% of your hot water use is in the shower! ¹ By installing AAA rated showerhead and AAA rated tap aerators you minimise the volume of water required but still maintain water pressure.
- Taking shorter showers costs you nothing and in fact will even save you money. Reduce your time in the shower to a maximum of 4 minutes. Time your family members and see if they are up to the challenge.
- Turn off your storage unit or gas pilot light if you are going away for an extended period of time.
- Insulate your water heating tank and pipes to reduce heat loss.

- Investigate a solar water heater or 5 star gas or heat pump (check for available rebates) if you are replacing your hot water system.
- If purchasing a gas system, check for the energy rating and choose one with 4 or 5 stars.



Hot Water Usage

Based on 140 litres usage per day
Information source
Global Warming Cool It ¹

- Every 15 litres of hot water used from an electric hot water system generates about one kilogram of greenhouse gas. ¹
- Take shorter showers, every minute less saves half a kilogram of greenhouse gases. ⁵
- To measure your shower flow rates, turn the shower on full and let it flow into a bucket for 10 seconds. Measure the amount of water in litres. Multiply by six for the flow rate in litres per minute. Don't forget to reuse the water either on the garden or next time you wash up. AAA rated showerheads have a flow rate of 9 litres per minute – how does yours compare?